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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/775,058

Applicant(s)

KIM, YOUNG-CHAN

Examiner

Ryan R. Yang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24, 26-32, 34, 35, 40, 41, 47, 49, 52-61, 63, 64, 66, 67 and 69-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) 20-24, 26-32, 34, 35, 40, 41, 47, 49, 52-61, 63, 64, 66, 67 and 69-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***(Reissue Applications)***

1. This action is responsive to communications: amendment, filed on 4/30/2007.

This action is final.

2. Claims 1-24, 26-32, 34-35, 40, 41, 47, 49, 52-61, 63, 64, 66, 67, 69-72 are pending in this application. Claims 1, 5, 13, 20, 34-36, 40, 47, 49, 52, 55, 57, 59, 71 and 72 are independent claims. In the Amendment, filed on 4/30/2007, claims 20, 34, 35, 40, 52, 57 and 59 were amended, claims 25, 33, 36-39, 42-46, 48, 50-51, 62, 65 and 68 were canceled, and claims 70-72 were added.

3. This application is a reissue application of Application No. 09/412,745 filed 10/5/1999, which is now Patent No. 6,346,972, which has Foreign Priority dated 5/26/1999.

4. The present title of the invention is "Video display apparatus with on-screen display pivoting function" as filed originally.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 47, 49, and 57-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claim 47 limitation "receiving a selection of the one or more screen function keys while the screen body is powered on and the OSD is not being displayed on the screen body" is not disclosed in the specifications.

Claim 49 has similar limitations as claim 47, and is rejected for the same reason as claim 47.

The Claims 57 and 59 limitations "an OSD generator to generate an internal OSD color component video signal separate from the external color component video signal" is not disclosed in the specifications.

Claims 58 and 60 are depended on claims 57 and 59, respectively, and therefore are rejected for the same reason as claim 57.

***Claim Rejections - 35 USC § 102***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 34-35, 61 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Kishimoto et al. (5,134,390).

As per Claim 34, Kishimoto et al., hereinafter Kishimoto, discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body, the method comprising:

receiving an externally input video signal having a second image ("An image input unit 4, e.g., an image scanner, reads image information on a medium in the form

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of binary signals”, column 3, line 30-32, where the image scanner receives image from external);

displaying the second image (Figure 1, item 11);

modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation (Figure 6, where the guidance information 62 is modified (66 or 69) to remain in perspective with respect to the rotated screen; and FIG. 1, where item 2 can manipulate display mode, column 4, line 64- column 5, line 4); and

displaying the first image that corresponds to the modified OSD data on the second image displayed on rotatable screen (Figure 1, item 11 and Figure 6 is a modified first image on a second image).

10. As per Claim 35, Kishimoto discloses a video display apparatus having a screen body to display an on- screen display (OSD) image, the video display apparatus comprising:

a converter to receive externally inputted video signals having a picture (“An image display control unit 8 controls the display of image data on a display 11, e.g., to determine the display position, magnification and display format of image data”, column 3, line 42-45);

a controller to generate a mode signal indicating a rotated state of the screen body according to a key manipulation (Figure 1, item 9; “The end position detection circuit 903 supplies display rotary position information 903 to the main control unit ... in accordance with the position detection signals 117a and 118a supplied from the rotary

position detection switches 117 and 118", column 5, line 21-27; and FIG. 1, where item 2 can manipulate display mode, column 4, line 64- column 5, line 4); and

a circuit unit to display the picture of the externally inputted video signals on the screen body and to display the OSD image containing information about operation of the screen body at a rotated position in accordance with the mode signal on the displayed picture (Figure 7 is a circuit unit; Figure 6 shows rotated states; "guidance information 62, e.g., for function keys, is displayed on the display screen 63 as the guidance information 66 and on the display screen 67 as the guidance information 69", column 5, line 66- column 6, line 1, where the guidance is considered the information as claimed).

11. As per claim 61, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, and further discloses wherein the displaying of the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen comprises displaying the first image in a center of the rotatable screen ("FIG. 6, an image 65 of the image data is displayed on the screen at the same position, while the display 11 physically rotated by 90 degrees", column 5, line 57-59, for the image to remain at the same position after rotation, the image is inherently at the center of the display).

12. As per claim 67, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, supra, and further discloses the first image including the OSD indicates screen viewing settings comprising at least one of a brightness of a screen picture affecting the displayed second image and a size of the screen picture affecting

the displayed second image ("The character data are superposed on the image 65 after being converted to a predetermined position and magnification factor, in according with a display mode defining the shape and dimension of a display area", column 6, line 2-6).

***Claim Rejections - 35 USC § 103***

13. Claims 20, 40, 41, 52-53, 55-56, 63, 69, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504) and further in view of Kishimoto et al. (5,134,390).

14. As per Claim 20, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

generating a mode signal indicating a rotated state of the screen body according to manipulation of a key (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image on the displayed picture at a rotated position in accordance with the mode signal ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display

viewing angle control amount is displayed as the OSD character", column 4, line 67-column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto et al., hereinafter Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

15. As per Claim 40, Kim discloses a method of displaying a first image including an on-screen display (OSD) color component video signal in a video display apparatus having a rotatable screen, the method comprising:

receiving an external color component video signal having a second image ("a camera signal processor 10 which captures an image of an object and outputs a corresponding composite video signal", column 3, line 25-27, where the captured image is an external image; and "The camera signal processor 10 includes a digital-to-analog (D/A) converter 15 for converting the output signal ... and a mixer 16 for mixing the separated luminance signal Y and color signal C to output a composite video signal", column 2, line 36-40);



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displaying the second image to the video display apparatus (Figure 1A, item 60 where the image is displayed);

modifying OSD data corresponding to the first image including the OSD color component video signal with respect to an angle of rotation of the screen when the screen is rotated, according to manipulation of a key ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3, and (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42)); and

displaying the first image corresponding to the modified OSD data on the second image displayed on the rotated screen ("The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

16. As per claim 41, Kim demonstrated all the elements as disclosed in the rejected claim 40.

Kim discloses a rotatable display. It is noted that Kim does not explicitly disclose the angle of rotation of the screen is obtained by rotating the screen in the clockwise or counterclockwise directions, however, this is known in the art as taught by Kishimoto. Kishimoto discloses and OSD screen that can be rotated in either directions (Figure 2 where the rotary shaft 115a can be rotated clockwise or counterclockwise).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Kim because Kim discloses a method of displaying an OSD image and Sakamoto discloses the screen could be rotated in order for convenient viewing.

17. As per claim 52, Kim discloses a video display apparatus having a rotatable display unit, the video display apparatus comprising:

an external signal unit to receive an external image signal ((“a camera signal processor 10 which captures an image of an object and outputs a corresponding composite video signal”, column 3, line 25-27, where the captured image is an external image);

an OSD generator to generate an internal OSD image signal (Figure 1A, item 70),

a control unit to generate a mode signal indicating a rotated state of the display unit according to a key manipulation (Figure 1B, item 42); and

a circuit unit to drive the display unit to display the external image signal and to drive the display unit to display the internal OSD image signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1A, item 50).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

18. As per claim 53, Kim demonstrated all the elements as disclosed in the rejected claim 52.

Kim discloses an OSD display method. It is noted that Kim does not explicitly disclose one or more function keys to change operation settings thereof such that the circuit unit drives the display unit to display the internal OSD image signal in response to a selection of the one or more function keys, however, this is known in the art as

taught by Kishimoto. Kishimoto discloses that function keys are used to change the operation of the apparatus (Figure 12; "it is checked if the operator has instructed to rotate the display device 112 by means of the keyboard 2 or a predetermined switch (not shown) (step1201)", column 8, line 20-22).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of display OSD and Kishimoto discloses the function keys could be used to change the operation setting of the display in order to quickly made to change of the display.

19. As per claim 56, the claim limitation is similar to claim 53, therefore is similarly rejected as claim 53.

20. As per claim 63, Kim demonstrated all the elements as disclosed in the rejected claim 40, and further discloses the limitation similar to claim 61, therefore are similarly rejected as claim 61.

21. As per claim 69, Kim demonstrated all the elements as disclosed in the rejected claim 40, supra, and further discloses the limitation similar to claim 67, therefore is similarly rejected as claim 67.

22. As per claim 55, the claim limitation is similar to claim 52, therefore is similarly generated as claim 52.

23. As per Claim 71, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body supporting the screen, the method comprising:

generating a mode signal indicating a rotated state of the screen body (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image simultaneously on the displayed picture ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

24. As per Claim 72, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body supporting the screen, the method comprising:

generating a mode signal indicating a rotated state of the screen body (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image simultaneously on the displayed picture ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66-column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and

Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

25. Claim 34 is rejected under 35 U.S.C. 103(a) as unpatentable over Buxton et al. (6,115,025) and further in view of Kim (5,949,504).

As per Claim 34, Buxton et al., hereinafter Buxton, discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body, the method comprising:

- receiving an externally input video signal having a second image (Figure 3a, item 34 is a graphical object inputted from computer 10);

- displaying the second image (Figure 3a, item 34);

- modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation (Figure 3b, item 30 where the user interface 30 is modified to be fixed in relation to a view point 36 even though the display 32 is rotated); and

- displaying the first image that corresponds to the modified OSD data on the second image displayed on rotatable screen (Figure 3b).

Buxton discloses a method of displaying image on a rotatable screen. It is noted Buxton does not explicitly disclose the display mode could be modified by a key input, however, this is known in the art as taught by Kim. Kim discloses an image display method in which the display mode could be modified by a key control (FIG. 1, item 42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kim into Buxton because Buxton discloses a method to display image

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and Kim discloses the display mode can be controlled by key input in order provide flexibility for display.

26. Claims 21-24, 26-29, 32 and 66 are rejected under 35 U.S.C. 103(a) as being obvious over Kim (5,949,504) and further in view of Register (5,661,632).

27. As per Claim 21, Kim demonstrated all the elements as disclosed in the rejected claim 20.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose the mode signal is generated in accordance with a user input indicating the rotated state of the screen body, however, this is known in the art as taught by Register. Register discloses a user input indicating the rotated state of the screen body (Figure 2, button 34 is user input).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses an OSD display and Register discloses the rotated state of the screen body could be user inputted in order to control the image display.

28. As per Claim 22, Kim demonstrated all the elements as disclosed in the rejected claim 21.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose wherein the user input is made by a direct key selection, however, this is known in the art as taught by Register. Register discloses a user input by a direct key selection (Figure 2, button 34 can be directly selected).



Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses an OSD display and Register discloses the rotated state of the screen body could be directly key inputted in order to conveniently control the image display.

29. As per Claim 23, Kim demonstrated all the elements as disclosed in the rejected claim 20.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose rotating the OSD in accordance with the mode signal, however, this is known in the art as taught by Register. Register discloses OSD is rotated according with the mode signal (Figures 4 and 5 shows rotated state in accordance with the mode signal).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses an OSD display and Register discloses the OSD could be rotated according to the mode signal in order to maintain a proper viewing.

30. As per Claim 24, Kim demonstrated all the elements as disclosed in the rejected claim 23, and since the further claim limitation is similar to claim 21, it is similarly rejected as claim 21.

31. As per Claim 26, Kim demonstrated all the elements as disclosed in the rejected claim 23.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose reordering read sequence of the OSD data which is stored in a data memory, however, this is known in the art as taught by Register. Register discloses the OSD data

is reordered ("The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees", column 5, line 13-16).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses an OSD display and Register discloses the OSD data could be reordered in order to maintain a proper viewing.

32. As per Claim 27, Kim demonstrated all the elements as disclosed in the rejected claim 26.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner, however, this is known in the art as taught by Register. Register discloses texts or symbols that are perpendicularly rotated (Figure 4 and Figure 5, items 54a and 54b).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses a an OSD display and Register discloses the character or symbol represented by the OSD data could be perpendicularly rotated in order for it to be easily seen.

33. As per Claim 28, Kim demonstrated all the elements as disclosed in the rejected claim 23.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose reordering read addresses of the OSD data which is stored in a data memory, however, this is known in the art as taught by Register. Register discloses the OSD data

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is stored in a data memory ("The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees", column 5, line 13-16).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching Register into Kim because Kim discloses an OSD display and Register discloses the OSD data could be stored in order for quick re-display.

34. As per Claim 29, Kim demonstrated all the elements as disclosed in the rejected claim 28, and since the claim limitation is similar to claim 27, it is similarly rejected as claim 27.

35. As per Claim 32, Kim demonstrated all the elements as disclosed in the rejected claim 20.

Kim discloses a method OSD display. It is noted that Kim does not explicitly disclose activating a key located on the rotatable screen body, however, this is known in the art as taught by Register. Register discloses a key located on the rotatable screen body (Figure 4, key 34).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching Register into Kim because Kim discloses an OSD display and Register discloses the a key located on the rotatable screen body in order for convenient input.

36. As per claims 66, Kim demonstrated all the elements as disclosed in the rejected claim 40, supra.

Kim discloses a rotatable display. It is noted that Kim does not explicitly disclose that the first image is a control window, however, this is known in the art as taught by

Register. Register discloses a rotatable display in which an image can be used for control input ("Different command text and/or graphics "C" is appropriately displayed in each of the command icons 54a", column 3, line 41-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses a rotatable display and Register discloses the displayed graphical icons in the window can be control input in order easily change the display setting.

37. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504) and further in view of Sakamoto et al. (5,329,289).

38. As per Claim 30, Kim demonstrated all the elements as disclosed in the rejected claim 20.

Register discloses an OSD display screen. It is noted that Register does not explicitly disclose reading OSD data contained in the OSD image as first OSD data and modifying the first OSD data as second OSD data according to the generated mode signal, however, this is known in the art as taught by Sakamoto et al., hereinafter Sakamoto. Sakamoto discloses

reading OSD data contained in the OSD image as first OSD data ("data on an onscreen display stored in the display status storing region in the RAM 11b is read through the CPU 10 in the initialization routine stored in the ROM 11a (S2)", column 4, line 52-55); and

modifying the first OSD data as second OSD data according to the generated mode signal ("If it is recognized as the vertically elongated screen, a command is

accordingly sent through the CPU 10 to the display controller 16 to set a vertically elongated on-screen format to the display unit 3 (S4)", column 4, line 58-62).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Register because Register discloses a method of display dual mode image and Sakamoto discloses the generated image could be modified in order for it to be suitably displayed in different modes.

39. As per Claim 31, Kim and Sakamoto demonstrated all the elements as disclosed in the rejected claim 30, and Sakamoto further discloses the modifying operation comprises:

storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body ("the RAM 38 is a memory which can write/read upon occasion and which has a function to temporarily store input data ", column 8, line 40-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Kim because Kim discloses a method of displaying an OSD image and Sakamoto discloses the generated image could be modified in order for it to be suitably displayed in different mode.

40. Claims 54 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim as applied to claim 52 above, and further in view of Register.

41. As per claims 54 and 66 Kim demonstrated all the elements as disclosed in the rejected claims 53 and 40, supra, respectively, and further discloses a screen (Figure 3B, item 60).

Kim discloses a rotatable display. It is noted that Kim does not explicitly disclose "a rotatable screen body surrounding the screen having the one or more function keys installed thereon", however, this is known in the art as taught by Register. Register discloses a rotatable display with function keys surrounding the screen (Figure 1, items 34a and 34b).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses a rotatable display and Register discloses the function keys can be placed around the display screen in order for easy access.

42. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto as applied to claim 34 above, and further in view of Register.

As per claim 64, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, *supra*.

Kishimoto discloses a rotatable display. It is noted that Kishimoto does not explicitly disclose that the first image is a control window, however, this is known in the art as taught by Register. Register discloses a rotatable display in which an image can be used for control input ("Different command text and/or graphics "C" is appropriately displayed in each of the command icons 54a", column 3, line 41-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kishimoto because Kishimoto discloses a rotatable display and Register discloses the displayed graphical icons in the window can be control input in order easily change the display setting.

43. Claims 57-60 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504).

As per claim 57, Kim discloses a video display apparatus having a rotatable display unit to display an image of an external color component video signal, the video display apparatus comprising:

an OSD generator to generate an internal OSD color component video signal separate from the external color component video signal (Figure 1B, item 41 generates OSD image signal);

a control unit to generate a mode signal indicating a rotated state of the display unit according to manipulation of a function key (Figure 1A, "The information of the position and direction of the LCD panel according to the rotation of the display viewing angle control motor 51 is fed back to the main controller 41", column 4, line 50-52; Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42); and

a circuit unit to drive the display unit to display the internal OSD color component video signal on the image of the external color component video signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1A and Figure 1B).

As for the internal OSD color signal that is colored, since the generated video image is colored, it would have been obvious to one of ordinary skill to also make the OSD display colored in order to commensurate the images.

44. As per claim 58, Kim demonstrated all the elements as disclosed in the rejected claim 57, and further discloses:

an external signal unit to receive an external image signal such that the circuit unit further drives the display unit to display the external image signal with the internal OSD image signal (Figure 1A and Figure 1B, item 10 is an external signal unit, and item 41 provides internal OSD image signal).

45. As per claim 59, Kim discloses a method of controlling a video display apparatus having a rotatable display unit, the method comprising steps similar to claim 57 limitations, therefore is similarly rejected as claim 57.

46. As per claim 60, Kim demonstrated all the elements as disclosed in the rejected claim 59, and further discloses the steps similar to claim 58 limitations, therefore is similarly rejected as claim 58.

As per claim 70, Kim demonstrated all the elements as disclosed in the rejected claim 57.

As for the rotatable display unit display unit displays the OSD image on the screen according to manipulation of another key, since it is notoriously well known in the art (Official Notice) that a plurality of keys are used to set control a plurality of display mode, it would have been obvious to one of ordinary skill in the art at the time the invention was made in order to easily input choices.

***Allowable Subject Matter***

47. Claims 1-19 are allowed.



***Response to Arguments***

48. Applicant's arguments filed 4/30/2007 have been fully considered but they are not persuasive.

As per claims 47, 49, 57 and 59, Examiner does not think the sighted specification commensurate with the claimed limitations.

As per claims 20-24, 26-31, 47, 49 and 52-60, alleges the amendment overcome the rejections. In reply, Examiner contends Kim also teaches the amended limitation. As for the display to show the first image and a second OSD image. In reply, Examiner considers the OSD portion 70 as displaying the OSD image.

As per claims 34, 40-41, 61, 63-64, 66, 67 and 69, applicant alleges that Kishimoto does not show an OSD image as a second image displayed on the first image. In reply, Examiner considers the second image 51 (FIG. 5) is displayed on the first image 52. As for the Register reference, since it is useful in the display art, one of ordinary skill in the art would be able to apply its teaching in order to achieve a desired utility.

As for claims 61 and 63, since the image in Kishimoto remains in the same general location after rotation, the image is inherently centered.

As for claim 69, "indicates" is considered as not part of the limitation.

***Conclusion***

49. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Inquiries***

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan R. Yang whose telephone number is (571) 272-7666. The examiner can normally be reached on M-F 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Ryan Yang  
Primary Examiner  
May 27, 2007